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EXAMINER

STAHL, MICHAEL J

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 07 30 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,439

Applicant(s)

HODGE ET AL.

Examiner

Mike Stahl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 12, 15-20, 22, 24-36 and 38-51 is/are rejected.
- 7) ☒ Claim(s) 9, 11, 13, 14, 21, 23 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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This office action is in response to the amendment filed May 9, 2003. The changes to the claims have been entered. Claims 1-51 are pending. The double patenting advisory concerning claims 49-51 in the last action is withdrawn in view of the changes to these claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 6, 8, 12, 15-20, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Toffetti (US 5313546).

Toffetti discloses an enclosure **11** for joining optical fiber cables, including a housing (with a base **16**), and a number of ports **14** and **15** (figs. 1-2). Although only two apertures (ports) are shown, Toffetti teaches that there may be more than just two ports **14** and **15** (claim 1, col. 3 lines 1-3). Furthermore, although the reference does not refer to “distribution” or “drop” cables or ports literally, it is apparent that the device is intended to join a number of distribution cables and it is asserted that branching off of drop lines is within the scope of the reference. The arrangement shown in figs. 1 and 2 includes one cable per port. Therefore the Toffetti arrangement anticipates independent claims 1 and 18 and dependent claim 12. As to

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independent claim 15 and dependent claim 24, the arrangement further includes a cover plate **17** and a sealing member **21** coupled to the cover plate.

As to claims 2, 17, and 19, the cables described in Toffetti are optical fiber distribution cables.

As to claim 6, the drop line would be coupled to the distribution cable through at least an optical splice, which can be considered an optical device.

Regarding claims 8 and 20, the Toffetti arrangement includes removable open drop plugs **23** which seal the drop port around drop lines (see also figs. 6-7).

As to claim 16, the arrangement includes drop plugs which seal around drop lines as described above, and the sealing member **21** seals the gap between the cover plate **17** and the housing **16** (along their respective surfaces **19** and **18**) and also seals the gap between the cover plate and the drop plugs **23** (col. 2 lines 42-45 and 51-55).

Claims 1-2, 6, 8, 18-20, 27-28, 31-32, and 35-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Schneider et al. (US 5495549).

Schneider discloses an enclosure **10** including a housing (generally **16** but also including frame **12**), first and second ports **21** and **18** for entry of distribution cables **25** and **27**, and a drop port **19** for entry of a drop line **26** (see figs. 1 and 2). The drop line can be coupled to one of the fibers from a distribution cable. Each cable **25-27** enters the housing via its own port. Claims 1 and 18 are therefore satisfied by the Schneider enclosure.

As to claims 2 and 19, the distribution cables **25** and **27** are optical fiber cables.

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Regarding claim 6, the drop line is coupled to a distribution cable by an optical splice.

As to claims 8 and 20, the enclosure includes open drop plugs **120** and **121** which seal the drop port around the drop line (see fig. 12).

As to independent claim 27, the Schneider enclosure is equipped to handle cables of differing diameters by means of the self-sizing property of grommets **120** and **121** described at col. 6 lines 29-43. When unequal diameter cables are coupled to the enclosure, the respective ports provide openings having different cross-sectional areas. The enclosure also includes strain relief devices **38-43**. Given that different diameter cables are involved, the associated strain relief devices when tightened would consequently define holes of different cross-sectional area. Thus the Schneider arrangement anticipates claim 27.

As to claim 28, the enclosure further comprises a third strain relief device **49** adjacent to the first strain relief device **41** (see fig. 4), to form a two-stage strain relief system.

As to claims 31 and 32, the enclosure further comprises fiber splice trays **78** (see fig. 7).

As to claims 35 and 36, the enclosure includes removable drop plugs **120/121** which seal the cables in the ports as already described. The plugs also seal the ports when no cables are present (col. 5 lines 46-59).

Claims 40, 42, 44-45, 47, and 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Daugherty et al. (US 4295005).

Daugherty discloses a strain relief device comprising a support member **22** having a clamp receiving portion and a clamping device **28** coupled to the support member. The clamp

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receiving portion includes a slot **26** which embodies an opening leading from the outer edge to the interior of support member **22**. See figs. 1-3 and col. 3 lines 6-36. The support member holds the clamping device prior to tightening (by means of a retaining bridge **30**). Thus the Daugherty arrangement satisfies claims 40 and 49.

As to claim 42 and 50 the bridge **30** defines a hole in the interior of support member **22**. The opening (i.e. slot **26**) in the support member **22** leads to that hole, and the clamping device **28** is coupled to support member **22** by being inserted into that hole. As to claims 44 and 51, the opening defined by bridge **30** has the form of a slot. As to claim 45, the opening included by the slot is perpendicular to an edge of support member **22**. As to claim 47, the strain relief device is coupled to a splice enclosure

Claims 40-51 are rejected under 35 U.S.C. 102(a) as being anticipated by Cloud (US 6215939).

Cloud discloses a strain relief device (fig. 6) for use in an optical fiber splice case, comprising a support member **110** having a clamp receiving portion comprising an opening **120** leading from an edge to an interior of the support member, and a clamping device (tie-down strap, not shown) coupled to the support member at the receiving portion. The clamp receiving portion holds the clamping device in place before tightening (col. 8 lines 4-14). Thus the Cloud device satisfies claims 40 and 47-49.

As to claim 41, the clamping device comprises a plastic band which can be fastened back on itself (col. 7 line 67 col. 8 line 1).

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As to claims 42 and 50, the clamp receiving portion includes a hole **132** in the interior of the support member **110**, the opening **120** leads from the edge to the hole, and the clamping device is inserted into the hole.

As to claim 43, the clamp receiving portion includes an additional hole **130** in the interior of the support member, and an additional opening **118** which leads to that hole. The clamping device is inserted into both holes.

Regarding claims 44 and 51, the clamping receiving portion includes a slot (e.g. the narrow region between adjacent holes **132**) in the interior of the support member, the opening **120** leads from the edge to the slot, and the clamping device is inserted into the slot (at least on its way to the inner hole **132**). Regarding claim 45, the slot is perpendicular to the insertion edge of the support member. The limitations of claim 46 are also satisfied in that there is another slot portion between adjacent holes **130**. Claim 46 is essentially the same as claim 43 except for a doubling of the structural elements.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 7, 10, 22, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toffetti (cited above).

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As to claims 3-5, Toffetti does not disclose the recited types of transmission media although it is noted that the enclosure may be used for telecommunication cables in general (col. 2 lines 6-9). A skilled person would have recognized that the benefits afforded by the Toffetti device are not limited only to optical fiber cables. It would have been obvious to such a person to use the Toffetti arrangement with other types of media cables since the advantages (e.g., more easily obtained hermeticity) taught by Toffetti would also be useful for these other cable types.

As to claims 7, 25 and 26, although no optical splitter is specifically described in Toffetti, it would have been obvious to a person of ordinary skill in the art to include an optical splitter in the housing between the distribution cable and any drop lines since this would allow the total number of optical fibers carried in the distribution cable, as well as the number of connections at the source, to be kept reasonably low (as opposed to carrying one fiber for every single drop line, and establishing an individual connection between every one of those fibers and the source).

As to claims 10 and 22, Toffetti does not describe closed drop plugs which seal unused drop ports. It would have been obvious to a person having ordinary skill in the art to initially provide additional drop ports in the Toffetti enclosure so as not to preclude the possibility of future expansion, and it would further have been obvious to provide completely closed drop plugs in order to maintain hermeticity of the enclosure until such additional ports are needed.

Claims 29-30, 33-34, and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al. (cited above).

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As to claims 29 and 30, Schneider shows only hose clamps as the first and second strain relief devices. However, it is noted that hose clamps are merely a representative example of a suitable strain relief device (col. 3 line 20). Self-fastening plastic cable ties are already well known and widely used in the art. A skilled worker would have found it obvious to use such plastic ties in place of some of the hose clamps since each plastic tie advantageously comprises only a single part, whereas hose clamps typically include multiple parts (e.g. a band and a bolt 45). Furthermore, a skilled worker would also have realized that hose clamps are advantageous over plastic tie fasteners in that they are repeatably adjustable while ties are usually not. Therefore it would have been obvious to a person having ordinary skill in the art to use both types of fasteners in the Schneider enclosure in order to benefit from their respective advantages (e.g. hose clamps would be used on cables which are frequently replaced or adjusted, while plastic ties would be used on the more permanent cables).

As to claims 33-34, although Schneider does not specifically disclose an optical splitter it is well known in the art to use an optical splitter to divide optical signals among a number of branch fibers. It would have been obvious to a person of ordinary skill in the art to include an optical splitter in the enclosure since this would enable coupling of optical signals to additional outgoing fibers without having to increase the number of incoming fibers carried in the distribution cable.

Regarding claim 38, Schneider shows a cover plate 152 but does not describe a sealing member to seal the gap between the cover plate and the remainder of the housing 151. Sealing members are routinely used in similar enclosures to prevent ingress of moisture, dust, and so forth. Since Schneider provides an air-tight entry for the cables, it would have been obvious to a

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skilled worker to provide a sealing member between the cover **152** and bottom portion **151** in order to render the entire enclosure air-tight. Since the cover **152** when closed rests above the drop plugs **120/121**, this sealing member would also seal any remaining gap between the cover and the drop plugs as required by claim 39.

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daugherty et al. (cited above).

Daugherty does not specify what type of telecommunication medium is carried by cable **46**. It would have been obvious to a person having ordinary skill in the art to use the Daugherty device with an optical fiber cable since it provides strain relief and since it is well known that optical fibers are particularly vulnerable to strain.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Response to Arguments

Applicant's arguments pertaining to the Toffetti reference have been considered but are not persuasive. In regard to amended independent claims 1 and 18, according to applicant's remarks at p. 23, Toffetti does not teach or suggest a drop port which allows a drop line to enter the housing via its own port since figs. 3 and 4 show multiple through-holes **28** in each gasket **24**. Yet earlier on p. 23, applicant referred to figs. 1 and 2 (as did the rejection) which show that in one embodiment the gaskets **23** have a single hole **25**. It was noted in the rejection that Toffetti teaches that more than two ports are possible. Therefore even if applicant is assuming that a distribution cable takes up two ports, it still stands that an additional port may be used for a drop line, and a single-hole gasket **23** can be used to seal that additional port.

As to independent claim 15, applicant argues that Toffetti does not teach or suggest a sealing member coupled to the cover plate. Applicant notes that the cover **17** includes a seat **20** in which a seal gasket **21** is inserted, but alleges that the seat does not retain the gasket to prevent it from falling away from the seat when the cover is removed and refers to a dictionary definition of "seat" to emphasize the point. It is noted that a dictionary listing generally will not cover every possible usage of a word, and that patentees are not constrained to use terms in exactly the same manner as they are presented in a dictionary. There is no teaching in Toffetti which would lead someone to conclude that the gasket **21** will fall out of the seat **20** when the cover **17** is removed. Toffetti states only that the gasket is inserted into the seat. In this regard there is not even a clear difference between the seat structure of Toffetti, into which the O-ring gasket may be inserted, and applicant's own structure shown in fig. 4B. Even if one assumes that the gasket is not secured to the seat, and would fall out when the cover is removed, the gasket is still

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coupled to the seat. Applicant appears to be interpreting "coupled to" far too narrowly. If applicant wants "coupled to" to mean that the sealing member is attached to the cover plate such that it will not fall off when the cover plate is removed from the housing, then the language of claim 15 must be amended to reflect this specific interpretation. However, as noted above it is not clear that the Toffetti arrangement fails to satisfy this interpretation.

Regarding Mahony, the examiner has withdrawn the rejections under Mahony made in the last office action. Independent claims 1 and 18 require that a drop line enters the housing via its own port. Applicant noted that fig. 5 of Mahony, which was referred to in the rejection, is merely schematic and does not illustrate the structure of the housing **500** or the ports in particular. The examiner agrees that Mahony does not provide enough detail to conclude that each drop line **404** has its own port, nor does Mahony suggest that it is necessary for each drop line to have its own port.

Turning to Schneider, applicant argued that cables **25-27** include multiple fibers and therefore Schneider does not show a drop line entering the housing via its own port. In basic terms a distribution cable is a main line such as a trunk or a backbone, and a drop line is a line which branches off from it. In the above rejection, cables **25** and **27** have been regarded as distribution cables, whereas the entire cable **26** has been regarded as a drop line. There is no language in claims 1 or 18 which limits a drop line to a single fiber. Although the present specification states that a drop line **155** typically includes a single optical fiber, it provides no teaching which excludes the use of multiple conductors (optical or electrical) as a drop line.

As to independent claim 27, applicant argued that none of the cited documents disclose first and second ports having different cross sectional areas. Schneider is the only reference

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which was applied to claim 27. The examiner maintains the position in the rejection that when unequal diameter cables are coupled to the enclosure, the respective occupied ports provide openings having different cross-sectional areas since the grommets **120/121** have self-sealing openings. It seems reasonable to assume that the port openings are the same size when no cables are present (if it is initially assumed that the grommets **120/121** are of identical construction), but claim 27 does not specify whether the ports are unoccupied. However, even if claim 27 were amended to specify that the port openings have different sizes when unoccupied, it does not appear that it would be unobvious for a skilled person to use grommets having differently sized openings in expectation of differently sized cables.

Applicant's arguments regarding the rejections under Daugherty are not persuasive. The rejections in this action have been expanded to accommodate the newly added limitations of independent claims 40 and 49; namely, that there is an opening in the support member which leads from an edge to the interior of the support member.

The rejections under Reichle and Miles made in the last office action have been withdrawn in view of the amendments to claims 40 and 49. Reichle clearly fails to show an opening which leads from an edge to the interior of the support member **21**. As applicant pointed out, the openings **48** in Miles are entirely within the interior of the support member **12**. They do not extend to an edge of the support member.

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Allowable Subject Matter

Claims 9, 11, 13-14, 21, 23, and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 9, 13, and 21 as amended recite that the drop plugs include a concave-rounded end. This feature is not taught or suggested by either of the references previously applied to these claims. Toffetti includes an opening **25** near the center of the drop plugs **23** for accommodating a drop line. Schneider similarly includes an opening near the center of the drop plugs **120/121**. There is no teaching or motivation to move the opening to an outer edge of the plug to create a concave-rounded plug end as required by claims 9, 13, and 21. Claim 14 depends from claim 13.

Claims 11, 23, and 37 as amended each require that the clamp receiving portion includes an opening which leads from an edge of the support member to an interior of the support member. Schneider, the only reference previously applied to these claims, does not clearly show this feature in the detailed view of fig. 4, nor does it provide any suggestion of this specific recited structure.

In summary, none of the references of record teaches or suggests each and every limitation of claims 9, 11, 13-14, 21, 23, and 37, in combination with all the limitations of their respective parent claims.

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Conclusion


Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Mike Stahl at (703) 305-1520. Official communications eligible for submission by facsimile may be faxed to (703) 308-7724 or (703) 308-7722. Inquiries of a general or clerical nature (e.g., a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at (703) 308-0956 or to the technical support staff supervisor at (703) 308-3072.

MJS

Michael J. Stahl
Patent Examiner
Art Unit 2874


HEMANG SANCHAL
PATENT EXAMINER

July 26, 2003